UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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July 31, 2013

Mr. Eric Summa, Chief
Environmental Branch,
Planning Division,
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

SUBJECT: Draft Integrated General Reevaluation Report II and Supplemental Environmental Impact Statement (SEIS), Jacksonville Harbor, FL. CEQ No. 20130148

Dear Mr. Summa:

To fulfill EPA's Clean Air Act (CAA) § 309 and National Environmental Policy Act (NEPA) § 102(2)(C) responsibilities, EPA reviewed the above draft SEIS. Under § 309, EPA is directed to review and comment publicly on the environmental impacts of Federal activities.

EPA's primary concerns are potential impacts to public water supplies, aquatic ecosystems including freshwater wetlands, mitigation, sensitive populations including environmental justice and children's health, and air quality. Our detailed technical comments are enclosed to assist with the preparation of the final SEIS. Based on our review, we have rated this draft SEIS as "Environmental Concerns" (EC-2) rating (EPA's rating criteria can be found at (http://www.epa.gov/compliance/nepa/comments/ratings.html)

Thank you for the opportunity to review this draft SEIS. As part of its Cooperating Agency role EPA will continue to work with COE to address our technical comments. If you wish to discuss this matter further, please contact Beth Walls, 404-562-8309 or walls.beth@epa.gov, of my staff.

Sincerely,

Heinz J. Mueller, Chief
NEPA Program Office
Office of Environmental Accountability

Enclosures: EPA Technical Comments
EPA EJ Maps

EPA Technical Comments on Draft SEIS, Jacksonville Harbor, Duval County, FL, CEQ No. 20130148

Background

Jacksonville Harbor is the primary deep-draft port for waterborne commerce in northeast Florida. Total tonnage handled in the port is approximately 17.5 million tons. Coal, petroleum products, food & farm products, vehicles and parts, and construction materials made up over 75% of the cargo composition between 2006 and 2010. These commodities transit primarily on container, liquid bulk, and dry bulk vessels.

The proposed action considers deepening the existing authorized 40-foot channel from the mouth of the St. Johns River (mile 0) upstream to mile 13. The Harbor's main shipping channel extends from mile 0 to the JAXPORT Talleyrand Marine Terminal (mile 20).[1] Deep draft vessels transit Jacksonville Harbor from the Atlantic Ocean to the Main Street Bridge (mile 23.6) in downtown Jacksonville.[2] Significant commercial and military vessel traffic is associated with the marine terminals at Blount Island (mile 9), Dames Point, (mile 10) Talleyrand Terminal (mile 20), and Commodore Point (mile 22).[3]

Purpose & Need: The study's purpose is to improve navigation in Jacksonville Harbor.

Alternatives: The draft SEIS considers potential environmental consequences of six alternatives: the no-action alternative, 44-, 45- (USACE *National Economic Development* plan), 46-, 47- (*Locally Preferred* and the *Tentatively Selected* plan), and 50- foot channel depths and the construction of two (Blount Island and Brills Cut) turning basins.

The Tentatively Selected and Locally Preferred plan to deepen the first 13 miles of the Jacksonville Harbor from the existing authorized 40 feet to 47 feet. This deepening is expected to require dredging and disposing of 18 million cubic yards of material. Over the proposed action's 50-year project life, the draft SEIS estimates 12 to 56 million cubic yards of maintenance-related dredged material will require disposal. The proposed action necessitates the expansion or re-designation of a new offshore dredged material disposal site.

Affected Environment: The lower St. Johns River is an estuary extending up to the confluence of the middle St. Johns River and the Ocklawaha River, upstream of Palatka City. The River's first 20 miles is a mix of dredged channels, to accommodate deep draft vessels, and an estuary having extensive salt marshes, wetlands, and hardwood hammocks supporting a diverse community of plants and wildlife.[4] Forested wetlands and tributaries draining extensive wetlands edge the river south of Jacksonville City and its suburbs. The next upstream 25 river miles consists of a highly urbanized watershed.[5]

Environmental Impacts: According to the draft SEIS, both the 45-foot *National Economic Development* and the 47-foot *Locally Preferred* plans would cause identical effects.[6] The proposed action is not expected to directly impact wetlands because none occur in the construction area. According to the draft SEIS, the proposed project could indirectly effect wetlands outside of the construction area by changing salinity frequencies within the transitional

zones of large river and creek systems.[7] Additionally, the area where most wetlands' functional losses could be expected is along the St Johns River, within the Ortega River, and Julington, Durbin, and Black Creeks.[8] Wetlands' functional changes are expected to consist primarily of accelerated wetland conversion from tidal swamp to tidal marsh.[9] The draft SEIS indicates forested-wetlands habitat may be reduced for freshwater species.[10] A substantial shift of salinities is expected further upstream in the St. Johns River, potentially converting approximately four miles of transitional zone into salt marsh.[11] Considerable areas of freshwater swamp from river mile 50 to 55 could potentially experience higher salinity frequencies, causing changes to the soil substrate, vegetative composition, and habitat use.[12] EPA also notes there are potentially unresolved issues regarding threatened and endangered species.

The draft SEIS indicates the USACE's commitment, in coordination with the interagency team, to ensure both the NED and LP plans will contain sufficient mitigation to compensate for impacts to ecological resources.[13]

EPA's Technical Comments

The draft SEIS indicates the following investigations are ongoing. The resulting information will be provided to stakeholders as the work is completed and will be provided in the final Supplemental Environmental Impact Statement (final SEIS).[14]

- Hydrodynamic modeling of the Tentatively Selected Plan with sea level rise
- Ecological modeling of fish and macroinvertebrate communities
- Water quality modeling
- Adaptive Hydraulics Modeling of the TSP
- Groundwater report prepared by the U.S. Geological Survey
- Storm surge and coastal modeling
- Tributaries and salt marsh modeling
- Ship wake modeling

We look forward to reviewing these studies as they are completed. We recommend the studies be made available to the public for review prior to publication of the final SEIS.

Water Quality – *public water supplies*

- EPA recommends the final SEIS discuss the surficial-aquifer characteristics in vicinity of the proposed action in context of potential impacts to aquifer-dependent drinking-water supplies.
  - The draft SEIS references U.S. Geological Survey's ground-water study to support the USACE determination the proposed action will not significantly increase the surficial-aquifer salinity.[15] Because the study has not been provided in the referenced appendix, EPA requests a copy of this ground-water study when it is available.
- EPA recommends the final SEIS describe the proposed action's construction impacts to the surficial-aquifer system.

- For example, the draft SEIS does not provide information on how the proposed action will cumulatively affect previous harbor dredging that has already exposed the surficial aquifer's major water-yielding unit directly to the St. Johns River.[16]
  - The draft SEIS does not provide any rock-removal volume estimates. It does not discuss how rock-removal may impact the aquifer's porosity and ability to transmit sea water associated with public water supply well-draw downs.[17]
    - EPA estimated from rock-acreage estimates given in the draft SEIS,[18] a rock volume of 4,309,677 cubic yards to be potentially extracted from the major water-yielding zone of the surficial aquifer system potentially exposing more of this unit's surface area to seawater intrusion.

- EPA recommends the final SEIS discuss the proposed action's potential impacts to existing ground and surface water bodies' ability to meet the uses of agricultural, cooling or other industrial/manufacturing uses.

Water-Quality Impacts – *Floridan-Aquifer*

- EPA recommends the final SEIS address whether the proposed action may have indirect effects to the sole-source designated areas of this aquifer. EPA has determined the Volusia-Floridan Aquifer as a sole or principal source of drinking water for public water supply systems and individual wells in designated areas of Florida pursuant to the Safe Drinking Water Act.[19]

Water-Quality Impacts – *Turbidity*

- EPA recommends the final SEIS evaluate the potential turbidity effects to water quality during the estimated five years of dredging and blasting the NED and LP plan.
- EPA recommends the final SEIS fully evaluate the long-term turbidity effects associated with larger ships using a deeper navigational channel. Larger ships will create larger wakes, potentially increasing shoreline erosion effects, and potentially disturbing and re-suspending bottom sediments. Additionally the widening effect associated with the proposed deepening will likely expose more surface area of unconsolidated sediments to erosion.
  - At recent public meetings, shoreline erosion has been a significant concern expressed by riparian property owners.
- EPA recommends the USACE consider avoidance and minimization techniques to reduce these potential environmental consequences and identify appropriate mitigation to address this concern.

Wetlands Impacts

- The draft SEIS indicates the salinity impacts analysis for the marshes and tributaries are ongoing.[20] This analysis is not included in the draft SEIS and unavailable to EPA for review to determine potential aquatic ecosystem impacts.
  - EPA requests a copy of the marshes and tributaries model details and assumptions supporting the wetlands impacts when it is available.
  - EPA does not agree with the draft SEIS' conclusion *there is no tremendous loss of wetland value*[21] associated with the potential conversion of freshwater wetlands into salt tolerant wetland. Because some aquatic organisms require a fresh-water phase in their life cycle (e.g., anadronomous and catadromous species) making them dependent upon a

freshwater ecosystems, it is clear freshwater wetlands provide a different and valuable function than saltwater wetlands, which may be lost associated with increased salinity

- The draft SEIS states [s]*alinity changes in the LSJR main stem would also affect tributary wetland communities.*[22] These affects include changes in vegetation and increases in sulfate levels in soil leading to soil subsidence, which would alter wetland appearance and function.
  - The draft SEIS indicates the LSJR tidal swamp to marsh transition is following a similar pattern observed in the Cape Fear River navigation channel,[23] where channel modification-induced salinity increases have impacted wetlands.
  - Similar to the Cape Fear River navigation channel, Jacksonville Harbor has a long history of channel modifications.[24] According to the draft SEIS, past deepening effects have already resulted in some upstream salinity movement as river shoreline wetlands show salinity stress within the project area.[25]

- Hydrodynamic Modeling:
  - Since the wetlands impacts appear to be defined primarily based upon project-induced salinity changes, hydrodynamic modeling was used to estimate potential salinity changes along the river's edge.[26] Because the final results of the salinity modeling were not provided in the draft SEIS, EPA is unable to determine the proposed action's potential impacts to wetlands at this time and request this information as soon as it is available.
    - The USACE assembled an Interagency Team to assist in conducting a Uniform Mitigation Assessment Method (UMAM) assessment for potential wetlands and sea grass impacts and associated mitigation.[27] While the hydrodynamic modeling results informed the UMAM assessment, the agencies were not given the opportunity to comprehensively review the modeling design and its implementation.
      - It is unclear whether the models used for TMDL purposes is appropriate or has been appropriately revised to model the salinity impacts of the proposed action. Modeling harbor deepening impacts is not the same as modeling nonpoint and point-source loadings for the purpose of establishing total maximum daily loads to inform national pollutant discharge elimination system permit limits.
      - EPA requests a copy of the model details and assumptions supporting the wetlands impacts when available.
  - EPA recommends the final SEIS explain how the ground-water component of the area's hydrologic system was factored into the hydrodynamic-modeling efforts sufficiently to reflect Florida's extensive groundwater systems associated with its karst geology.
  - EPA recommends the final SEIS discuss the use of a three dimensional model (EFDC) for the River's main stem and a two dimensional model (MIKE) for its tributaries.
  - EPA recommends the final SEIS discuss how the National Academy of Sciences' concerns with the SJRWMD models used were addressed.[28] Expectations are for a peer-reviewed model to be used to inform and evaluate environmental impacts prior to the ROD with opportunity for public review.

Environmental Mitigation - *wetlands*

- EPA recommends the final SEIS appropriately discuss wetland impacts in context of a specific mitigation plan defining USACE's commitment to implement.

- The draft SEIS describes the interagency team but not the findings because the study is ongoing at the time of the public review of this draft SEIS.
- The draft SEIS is vague on the wetlands impacts and associated mitigation plan.[29]
  - It states *USACE, in coordination with the interagency team, will ensure that both the NED Plan and LPP contain sufficient mitigation to compensate for effects on ecological resources.*
  - The draft SEIS briefly *lists five categories of mitigation options are being considered, and refers the reader to Appendix E for [a] more thorough description of the projected effects, assessment methodology, and mitigation proposed are included in Appendix E of this Report.* However, it does not provide any specific mitigation commitments.
  - EPA recommends the specific wetlands impacts described in Appendix E and specific mitigation commitments be provided in the main body of the draft SEIS.
- EPA requests a copy of the completed wetlands impacts analysis and proposed mitigation plan commitment as soon as it is available.

Environmental Mitigation - *submerged aquatic vegetation*

- EPA recommends the final SEIS appropriately discuss SAV impacts in context of a specific mitigation plan with specific mitigation commitments defining USACE's commitment to implement.
  - The draft SEIS indicates mitigation opportunities are under consideration to compensate for the proposed action's effects. EPA requests a mitigation plan for review.
  - The draft SEIS indicates mitigation in the form of regional storm-water treatment facilities to reduce agricultural nonpoint-source nutrient inputs into the St. Johns River to benefit sea-grass beds by improving water clarity.[30] However, no specific plan is proposed or partners identified to achieve the proposed reduction target. EPA recommends the final SEIS provide a plan with specific commitments and identified partners.

Environmental Mitigation – *adaptive management*

- EPA recommends the final SEIS provide an adaptive management plan that appropriately addresses mitigation deficiencies identified during the proposed monitoring period.
  - The draft SEIS states the USACE has prepared a long-term monitoring plan and an adaptive management plan to provide assurance actual effects will be monitored and coordinated.[31]
  - The draft SEIS states [a]*s stated in the adaptive management plan (see Appendix G), the USACE shall re-coordinate with the agencies in the event that monitoring detects deepening induced impacts that exceed the predicted impacts.*[32]
    - The adaptive management plan states [i]*f the success criteria for the mitigation, as described in the mitigation plan (Appendix E), are not met then modifications are warranted and re-coordination with the regulatory agencies and the public would occur.*[33]
      - The mitigation plan in Appendix E does not provide success criteria that would trigger appropriate modifications and agency re-coordination.
      - The mitigation plan does not identify a process for re-coordinating.
  - We recommend the USACE refer to the Central Everglades Restoration Plan and Central Everglades Planning Project's adaptive management plan and procedures as a guide to preparing an appropriate adaptive management plan to be included in the final SEIS.

- EPA recommends the adaptation management plan be appropriately discussed in the main body of the draft SEIS.
- EPA requests a copy of the completed adaptation management plan when it is available.

Offshore Dredged Material Disposal Site (ODMDS) Impacts

- EPA recommends the final SEIS clarify the draft SEIS' statement indicating *total capacity of either 55 million cy or 59 million cy depending on final configuration.*[34]" This statement appears inconsistent with the new Jacksonville ODMDS designation draft EIS, which indicates the new ODMDS should have a capacity of at least 65-million cubic yards. Moreover, the USACE has not conducted a detailed capacity analysis for the proposed alternatives being considered.
- EPA recommends the final SEIS correct the draft SEIS statement [t]*he USEPA estimated an annual maintenance dredging requirement for the harbor*[35] to reflect EPA's reporting of the USACE's estimate. Consequently, the USACE should be cited as the source of this information.
- EPA recommends the final SEIS clarify whether the placement of the additional dredged-material volume associated with the TSP will reduce 1) the existing or 2) the proposed future expanded ODMDS' project life by four years if the full 56 million cubic yards of maintenance dredged material requires placement in the ODMDS.
- EPA recommends the final SEIS correct the draft SEIS' statement [t]*he ODMDS draft EIS identified the following potential material management locations.*[36] EPA reported the USACE findings, but did not conduct any analysis or inventory of dredged material disposal locations.
- EPA recommends the final SEIS clarify its Fernandina ODMDS discussion. The Fernandina ODMDS does not have a 50-year mission. Additionally, EPA did not reach the conclusion that the Fernandina Beach ODMDS was not a viable solution. EPA did determine it was not an acceptable alternative to the designation of a new Jacksonville ODMDS.[37]
- EPA recommends the final SEIS clarify whether the required significant improvements to the berthing area bulkheads and other infrastructure associated with the proposed action[38] is accounted for in the total volume estimates provided or will result in increased dredged material volume requiring disposal.
- EPA recommends the final SEIS address the Marine Protection, Research and Sanctuaries Act requirements. All dredged material from this project must be evaluated and determined to be suitable for ocean disposal if it is to be disposed at the new Jacksonville ODMDS, and EPA must concur with the USACE's compliance determinations. EPA also recommends the SEIS discuss what testing is likely to be performed and when. Additionally for material not meeting the ocean disposal criteria, EPA recommends the final SEIS discuss where it will be disposed, including whether the project will maintain its feasibility if a portion of the material fails to meet the ocean disposal criteria.
- EPA recommends the final SEIS clarify ocean disposal is regulated by the Marine Protection Research and Sanctuaries Act not the Clean Water Act. The draft SEIS' discussion of the CWA 404(b)(1) Guidelines evaluation is focused on the dredged-material disposal at the Jacksonville ODMDS.[39]
- EPA recommends the final SEIS identify potential beneficial use sites and provide additional information regarding disposal site options, including for material not meeting ocean disposal

criteria, to facilitate factual determinations of short- or long- term effects upon the aquatic environments can be made.[40]

- The USACE has tested dredged material from the Jacksonville Harbor Channel on a number of occasions (e.g. 2004; 1998). EPA recommends the final SEIS include a summary these test results with more detail.
- The additional information should include a summary of sediment chemistry results; elutriate chemistry results, grain size, and biological test results and their applicability to new work material. Additionally, a summary of where and when the sediments were tested should also be included.
- EPA recommends the draft SEIS' statement *these tests indicate that no long-term impacts to water quality have been documented*[41] be re-examined and more fully supported in the final SEIS.

- EPA recommends the final SEIS clarify the draft SEIS' statement *these tests indicate that no long-term impacts to water quality have been documented.*[42] Because only dredged material from areas to passing the ocean dumping criteria is permitted to be disposed offshore, the objective is for no water quality impacts to occur. Since the USACE has not yet tested the material to be dredged, it is currently unknown whether any of this material will not meet ocean dumping criteria and require special management practices or a non ocean disposal site. Moreover in the area of the proposed action, there have been incidences of dredged material failing to meet the ocean dumping criteria and consequently unable to be disposed in the offshore ocean disposal site.
  - For example, some dredged material from both Jacksonville Harbor and Mayport Naval Station did not pass the ocean dumping criteria and was not permitted to be disposed offshore.
  - Another example is the new dredged material from Naval Station Mayport required special management practices in order to comply with the ocean dumping criteria.
  - Consequently, EPA notes a potential for adverse effects on aquatic environments from disposal of dredged material does exist.
- EPA recommends the final SEIS explain the basis for the 20 percent overdepth/bulking factor to the yearly dredging rate, which seems arbitrary because bulking alone can result in 20 percent or more dredged material than *in situ*.[43]
- EPA recommends the final SEIS define what part of the approximately 18 million cubic yards (TSP) or 13.5 million cubic yards (NED) is expected to be rock removed (i.e., from the surficial aquifer).
- EPA recommends the final SEIS clarify whether the estimated average annual increased shoaling volume[44] associated with the proposed action is included in the proposed action's 50-year total dredged material disposal volume projection and the impacts to the proposed future expanded ODMDS service life.[45]
- EPA recommends the USACE use its disposal models, e.g., MPFATE, to determine the best disposal operation strategy to minimize impacts to the ODMDS and to avoid exceeding its the depth limitations.

Sea Level Rise

- EPA recommends the final SEIS discuss the effects of anticipated sea-level rise over the 50-year project life and the need to construct the proposed action to the proposed depth to

accommodate the design vessels. Whether sea-level rise may naturally provide some increased water depth to facilitate deep-draft vessel passage without going to the full TSP depth.

- EPA recommends the final SEIS discuss how the proposed action will incorporate any revisions to the USACE's existing guidance,[46] which expires on September 30, 2013, to reflect updated scientific findings over the proposed action's life.

Storm Surge

- EPA requests the final storm-surge modeling results be provided when available. The draft SEIS indicates the storm-surge modeling effort is in progress to provide storm-event surge assessment including USACE sea-level rise rates for the proposed project alternative channel deepening.[47] Additionally, the referenced Attachment J does not appear to contain the ADCIRC boundary conditions for the project design and impact analysis as stated in the draft SEIS.
- EPA recommends the final SEIS discuss the effects of a deepened channel allowing a greater volume of seawater to penetrate the St. John's River upon the City of Jacksonville, surrounding areas including environmental justice communities, public water supply facilities, wastewater treatment facilities, and other public infrastructure.
  - Flooding, erosion, and salt-water intrusion through the porous limestone unit of the surficial aquifer are potential concerns associated with storm surges. The proposed action could possibly breach up to eleven feet of the lower part of the surficial aquifer. One substantial environmental concern is the proposed blasting may facilitate increased porosity and transmissivity of seawater into ground-water dependent public water supplies associated with storm events and high tides.
  - A concern exists for impacts associated with large, slow moving storm events upon areas already susceptible to storm-surge flooding. It is unclear whether the proposed action may exacerbate the storm-surge impacts and associated flooding risk of smaller storms than under existing conditions.
  - EPA recommends the final SEIS discuss storm-surge impact in context of low and high tides, previous histories of major storm-surge impacts, and sea-level rise.
  - EPA recommends the final SEIS' discuss the effects of a deepened channel allowing a greater volume of seawater to penetrate the St. John's River upon the Timucuan Ecological and Historical Preserve and the Huguenot Memorial Park near the river mouth in context of storm surge.
    - The draft SEIS states, [s]*ections 7.2.3 and 7.2.6 describe water salinity and elevation changes that may occur in the LSJR following project construction. Public lands-Timucuan Preserve, Huguenot Park, and other parks and preserves along the LSJR and its tributaries – will be subject to the described water salinity and elevation changes.* [48]
      - Sections 7.2.3 and 7.2.6 do not specifically address any public lands impacts as indicate above.
  - EPA recommends the final SEIS consider appropriate mitigation measures (e.g., informing the local county's emergency management program to allow them to update their storm surge maps, evacuation procedures, increasing storm-water retention areas, etc.).

Shoaling Rates

- EPA requests a copy of the completed shoaling study results when it is available. The draft SEIS indicates the USACE anticipates there will be negligible difference between the NED and LPP shoaling rates but additional sediment transport modeling is underway to confirm.[49]

Air Quality

- EPA requests a copy of the completed air emissions inventory as soon as it is available. While the draft SEIS provides basic information on air quality and general conformity, the emissions inventory was incomplete at the time of the draft SEIS publication for EPA and the public's review. The draft SEIS indicates the data collection process was ongoing.[50]
- EPA recommends the final SEIS clarify the draft SEIS' confusing and uninformative comparative regional air toxics analysis for identifying potential local air-toxic issues. Additional site and project characterization efforts are recommended.
  - EPA recommends the final SEIS:
    - Identify 'near-port' sensitive populations, e.g., day-care facilities, hospitals, nursing homes, schools,[51] and EJ communities located approximately 1,500 feet in context of any current or reasonably foreseeable future air toxics emission sources.
    - Consider prevailing meteorological conditions and relevant topography as part of the preliminary air-toxics assessment phase.

Environmental Justice (EJ) and Children's Health

- EJ:
  - EPA recommends the final SEIS identify the specific communities that may be located near and potentially affected by the proposed action and associated port facilities.
  - EPA recommends the final SEIS provide the key figures related to EJ concerns for minority and low-income populations at the appropriate scale to identify any potential impacts to these communities. EPA notes that the use of consolidated tract data makes it challenging to determine whether pockets exist along the navigation channels.
  - EPA recommends the USACE fully analyze the environmental effects on minority and low-income communities, including human health, social, and economic effects. The final SEIS should provide data and maps for unconsolidated tracts and/or block groups in an effort to identify areas with high minority and low-income populations. EPA is aware of several block groups within the project area having high minority and low-income populations because of our EJ Showcase project in Jacksonville. These areas should be readily identifiable in the data provided and targeted for meaningful public involvement and outreach.
    - Included with these comments, EPA is providing three maps to USACE to assist it with identifying potential EJ areas.
  - EPA recommends the EJ assessment be disaggregated from the Children's Health information. It should include a discussion of the potential direct, indirect and cumulative impacts (i.e., air, noise, water quality, aesthetics, health, and subsistence activities) to EJ populations. Public comments on EJ issues and the USACE corresponding responses should be summarized and any efforts to avoid, minimize, and mitigate impacts.
- Children's Health
  - EPA recommends the final SEIS include unconsolidated tract or block group data since the consolidated tract level data appears to indicate there may be individual tracts or block

groups within the project area with higher concentrations of children. Additionally, sensitive receptors should be mapped at the appropriate scale. For example, receptors within 1500 feet of the navigation channel/project area should be clearly identified and then additional buffer distances can be added to the appropriate scale maps of the project area to identify any potential risk of impacts to children.

- EPA recommends the children's health assessment be disaggregated from the EJ section and a discussion of the potential direct, indirect and cumulative impacts (i.e., air, noise, water quality, aesthetics, and health) to children in the vicinity of the project area be discussed. Additionally, efforts to avoid, minimize and mitigate impacts should also be identified.
- EPA recommends the final SEIS provide readable and comprehensible maps and figures and clearly describe all potential impacts with the proposed action and associated port activities upon children's health.
  - EPA recommends the maps of schools, day-care facilities, and hospitals have different legend colors for multiple poverty thresholds and be created at scales providing appropriate information, i.e., proximity of sensitive receptors to the navigation and transportation corridors.
  - For example, figure 60 depicts institutions like hospitals, schools and daycares and hospitals in the area at a scale so broad it is difficult to determine where the schools are, their proximity to the channel, etc. The final SEIS should identify sensitive receptors, their proximity to channel, and surrounding land-uses including facilities that contribute to the indirect or cumulative impacts to the communities.

Editorial Comments

- EPA recommends the final SEIS address why baseline conditions are considered to be the 2018 after construction of the proposed action scenario instead of the 2012/2013 authorized channel depth of 40 feet.
  - The draft SEIS states *for the 2018 conditions (immediately after construction of the Jacksonville Harbor Deepening Project) and the 2068 (project horizon).*[52]
  - Main Channel Salinity changes
    - The draft SEIS states [t]*able 45 provides the median salinity ... for the 2018 No Action (baseline).*[53]
    - The draft SEIS states [t]*he following tables provide the median salinity ... for the 2068 No-Action (baseline).*[54]
  - Other Water Quality Effects Tables refer to the 2018 conditions as baseline conditions.[55]
    - Table 50 refers to 2018 no-Action (baseline) simulation.
    - Tables 51- 53 refer comparison of 2018 baseline and 44, 46, and 50 foot alternative simulations.
- EPA supports the Corps efforts to integrate the Feasibility Study with the NEPA-required environmental study. However the combination of the two documents should be executed in a clear, organized fashion to facilitate a clear understanding of the proposed action and the comparison of the impacts between the reasonable and feasible alternatives.
  - EPA recommends the final SEIS explain the Feasibility Study terms in context of the NEPA terminology. This could be accomplished with a brief introductory paragraph explaining the overlap between the Feasibility and NEPA requirements with an

explanation of how the Feasibility Study and NEPA requirements are being termed and met.
  - The NEPA document should provide sufficient summary in the main body of regarding environmental impacts and how they were determined, mitigation and adaptive management planning with the technical information including supporting studies, methodologies, data, etc. placed in the Appendices.
- EPA recommends the final SEIS clarify the draft SEIS' inconsistencies in project volumes: section 3.1 states 7.6 to 31.5 million cubic yards and section 3.2 states 7.6 to 28.6 million cubic yards.[56]
- EPA recommends the final SEIS specify a number where the draft SEIS indicates [t]*he 20 year total for Cuts 14-42 is "#########.* [57]
- EPA recommends the final SEIS clarify why the Dredged Material Management Plan assumes a new work volume of 18-million cubic yards when the draft SEIS provides volumes of 7.6 to 31.5 million cubic yards.[58]
- EPA recommends the final SEIS explain and define its use of abbreviations to facilitate its comprehension.
  - HTRW is not defined where used.[59]
  - FWOP, PWW, and SLR were introduced into the Wetlands Effects discussion without definition.[60]
  - 'Ppt' is not defined where used.
  - Inconsistent salinity concentration measurement parameters are used. For example, the draft SEIS cites the USGS' use of *mg/l*[61] while the draft SEIS uses *ppt* when discussing aquatic ecosystem impacts.
- EPA recommends the final SEIS address the draft SEIS inconsistency in proposed monitoring costs. The Cost Summary Table provides a cost ($31,495,000) for the proposed monitoring program[62] while the Monitoring Plan[63] indicates $11,338,000.

Region 4 Contacts:

Consistent with EPA/USACE discussions of July 10 and 12th, 2013, EPA has offered and is offering its assistance to address our identified concerns with this draft SEIS prior to publication of the final. The following is a list of staff, their contact information, and expertise areas available to assist the USACE.

Beth Walls, Region 4 NEPA Program Office, walls.beth@epa.gov (404-562-8309).
Christopher Militscher, Region 4 NEPA Program Office - air toxics assistance, militscher.chris@epa.gov, (404-562-9512).
Ntale Kajumba, Region 4 NEPA Program Office - EJ and sensitive communities assistance, kajumba.ntale@epa.gov , (404-562-9620).
Eric Hughes, Region 4 Water Protection Division - salinity/ecological/water quality modeling review and analysis, the monitoring and adaptive management plan assistance, hughes.eric@epa.gov (904-232-2464).
Christopher McArthur, Region 4 Water Protection Division – offshore dredged-material disposal site assistance, mcarthur.christopher@epa.gov (404-562-9391).

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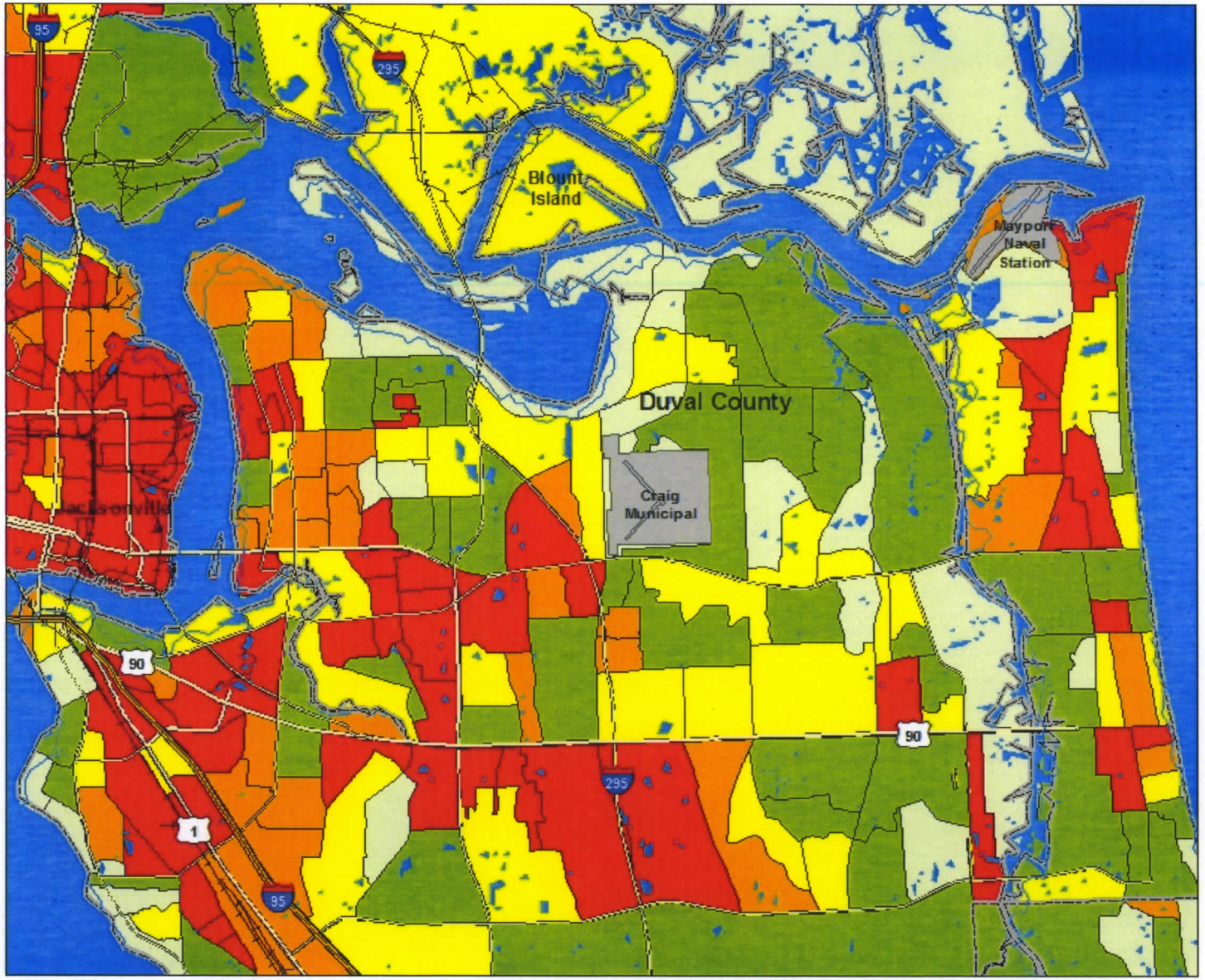
[1] Section 2.1, p.9.

[2] Executive Summary, p. iii.
[3] Section 2.3.1, p. 42.
[4] Section 2.3.1, p. 42.
[5] Section 2.3.1, p. 42.
[6]Section 7.3.9, p. 236.
[7] Section 7.3.9, p. 235.
[8] Section 7.3.9, p. 236.
[9] Section 7.3.9, p. 235.
[10] Section 7.3.9, p. 235.
[11] Section 7.3.9, p. 236.
[12] Section 7.3.9, p. 236.
[13] Sections 7.3.9 &10, p. 238 and p. 250.
[14] Executive Summary, p. viii – ix.
[15] Section 7.2.2, p. 174.
[16] G.G. Phelps, Water Resources of Duval County, Florida, U.S. Geological Survey, Water-Resources Investigations Report 93-4130 (1994). Available at http://fl.water.usgs.gov/PDF_files/wri93_4130_phelps.pdf
[17] The draft SEIS only states the estimated initial construction total dredged volume to be 18 million cubic yards and a doubling of estimated rock requiring removal under the NED.
[18] Figure 35, p. 216.
[19] Section 1424(e) of PL 93-523.
[20] Section 7.2.6.2, p. 181.
[21] Appendix E, p. 18.
[22] Section 7.3.9, p. 230.
[23]Section 7.3.9, p. 229.
[24] The Corps Brochure, *Jacksonville Harbor Deepening* available at http://www.jacksonvilleindustrialwaterfrontproperties.com/propertyinfo/Jacksonville%20Harbor%20Deepening.pdf and the draft SEIS, Section 7.13.2, p. 265.
[25] Section 7.13.2, p. 265.
[26] Section 7.3.9, p. 229.
[27] Section 6.1.1, p. 139.
[28] Public Meeting on Ecological Modeling – May 22, 2012, p. 296.
[29] Section 7.3.9, p. 238.
[30] Appendix E, Section 4, pp. 47 - 50.
[31] Executive Summary, p.vii. Section 4.1 Public Agency Concerns, p. 112
[32] Section 7.3.3.1, p. 209.
[33] Appendix G, p. 2.
[34] Section 5.6.1.2, p. 131.
[35] Section 7.2.8, p.190.
[36] Section 7.2.7, p. 190.
[37] Section 7.2.7, p. 190.
[38] Section 5.6.1.2, p. 131.
[39] Appendix I.
[40] Appendix I.
[41] Appendix I, Section 6.2.4.
[42] Appendix I, Section 6.2.4.
[43] Appendix P Section 2.1.
[44] Section 6.5, P. 162.
[45] Section 5.6.1.2, p. 131.
[46] *Sea-Level Change Considerations for Civil Works Programs*, EC 1165-2-212 (1 October 2011).
[47] Section 6.3.3, p. 142.
[48] Section 7.2.10, p. 191.
[49] Section 5.6.1.2, pp. 130 & 142.
[50] Section 7.2.7, p. 189.

[51] See: U.S. Department of Health and Human Services, Health Resources and Services Administration's Guidelines for Designation of Medically Underserved Areas and Populations, at http://bhpr.hrsa.gov/shortage/muaps/ .
[52] Section 7.2.6, p. 188.
[53] Section 7.2.6.1 , p. 179.
[54] Section 7.2.6.1, p. 179, referring to Tables 46 – 49.
[55] Section 7.2.6.3, pp. 182 - 188.
[56] Appendix I Sections 3.1 and 3.2.
[57] Appendix P, Table 2.
[58] Appendix P.
[59] Section 7.2.14, p. 193.
[60] Section 7.3.9, p. 236.
[61] Section 6.3.4, p. 143.
[62] Executive Summary, p. vi.
[63] Appendix F, p.13.

LOW INCOME PERCENTAGES AROUND ST. JOHNS RIVER, JACKSONVILLE, FLORIDA



Legend

- Major Streams
- Railroads

Major Roads

- Interstate Highway
- US Highway
- State Highway
- Secondary State Highway
- Other Major Road
- Counties
- Airports
- Indian Lands
- Water Bodies

% Low Income

LOWINCPCT

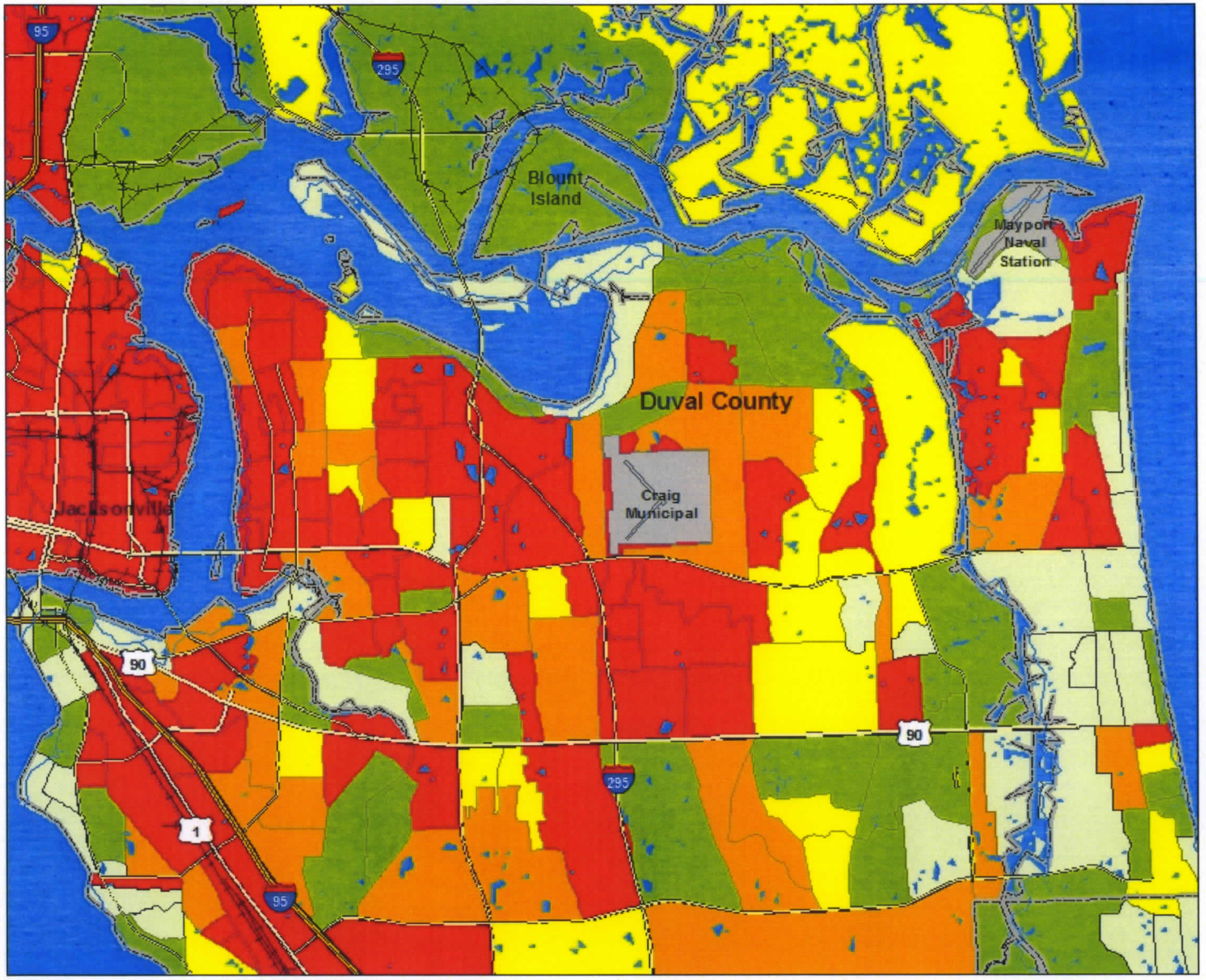
- 0.000000 - 0.100000
- 0.100001 - 0.200000
- 0.200001 - 0.300000
- 0.300001 - 0.400000
- 0.400001 - 1.000000

N

0 1,000 2,000 4,000 6,000 8,000 Meters

U.S. EPA REGION 4
OFFICE OF ENVIRONMENTAL ACCOUNTABILITY

MINORITY PERCENTAGES AROUND ST. JOHNS RIVER, JACKSONVILLE, FLORIDA



Legend

- Major Streams
- Railroads

Major Roads

- Interstate Highway
- US Highway
- State Highway
- Secondary State Highway
- Other Major Road
- Counties
- Airports
- Indian Lands
- Water Bodies

% Minority

MINORPCT

- 0.000000 - 0.100000
- 0.100001 - 0.200000
- 0.200001 - 0.300000
- 0.300001 - 0.400000
- 0.400001 - 1.000000

N

0 1,000 2,000 4,000 6,000 8,000 Meters

U.S. EPA REGION 4
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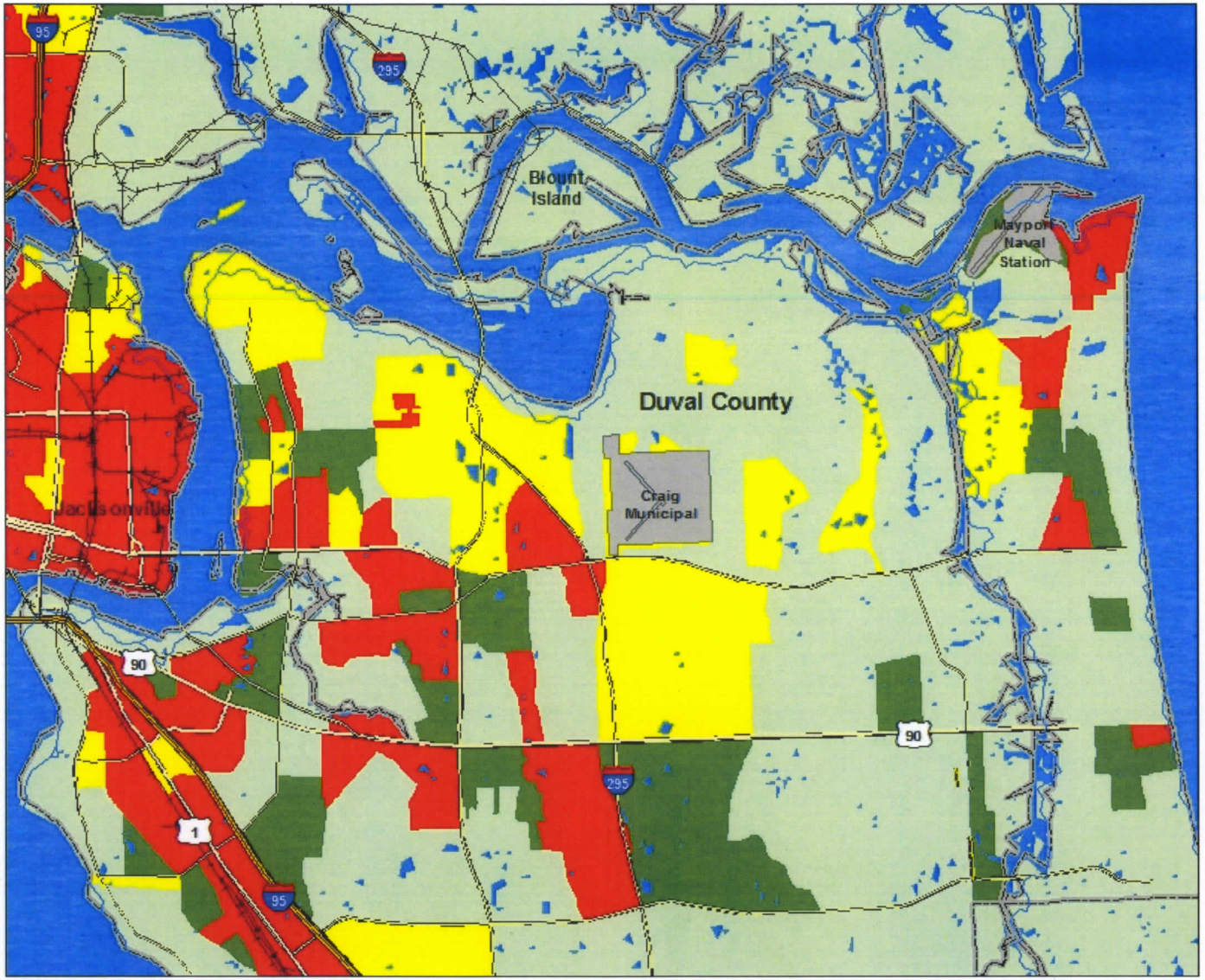
POTENTIAL EJ AREAS AROUND ST. JOHNS RIVER, JACKSONVILLE, FLORIDA



Legend

- Major Streams
- Railroads

Major Roads

- Interstate Highway
- US Highway
- State Highway
- Secondary State Highway
- Other Major Road
- Counties
- Airports
- Indian Lands
- Water Bodies

% Low Income/Minority

- Low Income
- Minority
- Low Income/Minority
- Below state average

N

0 1,000 2,000 4,000 6,000 8,000 Meters

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